

(5.0%), normal sinus rhythm 208 times (38.4%). Interference wave of 131 times (24.2%). (4) ILR patients during the follow-up period 17 cases (68%) with symptoms, 13 cases (52%) recorded to meaningful ECG was clear cause. 5 patients were asymptomatic but records into meaningful ECG was diagnosed. 18 patients (72%) with cardiac arrhythmias. (5) 18 cases of arrhythmia events recorded in patients by ILR, 2 cases not willing to once again ablation of atrial flutter, 5 cases of atrial tachycardia and 1 cases ventricular tachycardia in patients with antiarrhythmic drug therapy. 1 cases of before AF ablation with syncope symptom and paroxysmal atrial fibrillation, syncope again after ablation, ILR recorded syncope cause by ventricular tachycardia. 4 patients in sinus Beckoning bradycardia patients. After ablation of atrial fibrillation in 4 patients with atrial fibrillation, 1 cases of recurrent AFL patient underwent radiofrequency ablation. By the ILR, the 4 cases can be used to monitor the burden of atrial fibrillation in primary ablation:  $25.7 \pm 11.4\%$ ,  $23.9 \pm 7.5\%$ ,  $19.1 \pm 5.6\%$ ,  $18.7 \pm 3.2\%$ .

**Conclusions:** ILR has the advantages of efficient, safe, durable, high intelligence, information can be stored. Model ILR can be obtained from the burden of atrial fibrillation, ventricular rate during atrial fibrillation, the diurnal average heart rate, heart rate variability and trends in activity. It provide objective basis for clinical judgment, ablation of atrial fibrillation occurred recurrence rate and other cardiac events, and help for the reasonable application of anticoagulative drugs, help to reduce the risk of ischemic and hemorrhagic events; anti arrhythmic drugs or radio frequency ablation again provide reasonable and effective therapy.

## GW25-e1729

### Combining use of Amiodarone and Esmolol In Management of Patients with Ventricular Electrical Storm

He Yiping, Guo Hangyuan  
Shaoting People's Hospital

**Objectives:** To analyze the management of ventricular electrical storm with amiodarone and esmolol.

**Methods:** We conducted a retrospective analysis during last 5 years in our hospital. To review and assess the causes, differential diagnosis and treatment with ventricular electrical storm (VES). VES was defined by 2 or more sustained episodes of ventricular tachycardia or ventricular fibrillation within 24 hours. All patients were treated with electrical conversion or defibrillation emergently, and treated with amiodarone, if ineffective esmolol would be used.

**Results:** A total of 15 cases of ventricular electrical storm (ES) were included. Causes of ventricular ES included: coronary atherosclerotic heart disease ( $n=7$ ), Brugada syndrome ( $n=1$ ), Dilated cardiomyopathy ( $n=3$ ), Acute myocarditis ( $n=1$ ), Aconitine poisoning ( $n=1$ ), Idiopathic ventricular tachycardia ( $n=2$ ). All patients were treated with electrical conversion or defibrillation emergently with averagely 4.5 times. All cases were received intravenous injection of amiodarone, 5 cases were effective (the effective rate was 33%). 10 cases were resistant to amiodarone, and 7 cases were successful managed by intravenous injection of esmolol (the effective rate was 70%). 3 cases were died within 24 hours, 12 cases were treated successfully (the total effective rate of amiodarone and esmolol was 80%). After the ventricular ES subsided, 3 cases accepted ICD implantation. All 12 cases treated with amiodarone and betaloc oral maintenance. 1 case died suddenly during a half year follow-up. None of VES recurrence were monitored among the others.

**Conclusions:** Combining use of amiodarone and esmolol is effective in management of patients with ventricular electrical storm, the early use of beta-blocking agent especially esmolol should be considered.

## GW25-e2433

### Catheter Ablation versus Antiarrhythmic Drugs for Atrial Fibrillation: An Overview of Systematic Reviews

Li Zheng<sup>1,2,3</sup>, Mi Deng-Hai<sup>1,2</sup>

<sup>1</sup>Lanzhou University, <sup>2</sup>Second People's Hospital of Gansu Province, <sup>3</sup>Third Hospital of Hebei Medical University

**Objectives:** Atrial fibrillation (AF) is the most frequent arrhythmia seen in clinical practice. Antiarrhythmic drug (AAD) has a modest long-term efficacy and the potential for serious side effects. Catheter ablation (CA) is now considered as a viable alternative to AAD in maintaining sinus rhythm in patients with AF. Numerous systematic reviews (SRs) comparing CA with AAD for AF have already been published. Then, it is necessary and important to summarise the results of these SRs in an overview. To conduct an overview of SRs that evaluates the efficacy and safety of CA comparing with AAD for patients with AF.

**Methods:** We searched the Cochrane Library, PubMed, EMBASE, Web of Science and Chinese databases (CBM, CNKI and Wanfang) electronically and also retrieved papers from other sources, such as searching the reference lists of all included reviews and carrying out a citation search of those papers which cited studies included in the review. All relevant SRs were collected to compare CA with AAD for the maintenance of sinus rhythm in patients with AF. There were no language restrictions, and we did not restrict inclusion by the kinds of CA or AAD. Two investigators independently screened studies, extracted data and assessed the methodological quality according to appropriate criteria. Then all of these results were checked by a third investigator. We conducted this overview of SRs by descriptive analysis.

**Results:** We identified seventeen SRs for inclusion within this overview altogether, including one Cochrane reviews and sixteen non-Cochrane reviews. One paper was published in Chinese and the others in English. Most of the included SRs have eligible

methodological quality. A non-Cochrane systematic review showed similar survival of patients with AF undergoing CA compared with AAD after 12 months of follow-up, and with no difference in the rates of stroke or transient ischemic attack. Synthesized results of other sixteen SRs demonstrated that CA is superior to AAD for patients with paroxysmal or persistent AF, which was associated with higher efficacy rates and a lower rate of serious complications. Additionally, three SRs performed the economic evaluation compared between CA and AAD, and the synthesized analysis indicated that compared to the AAD strategy, CA had a higher costs with better effectiveness. **Conclusions:** Evidence from the present SRs suggest that CA may be a better treatment option compared to AAD in the management of AF. We can consider CA as a relatively effective and well-tolerated procedure for maintaining sinus rhythm. However, the comparison of long-term efficacy and safety between CA and AAD, as well as economic variable, should be further evaluated by more large sample and high quality studies. Ongoing clinical trials in the future may provide further information for guidance on these treatment options for AF.

## GW25-e3147

### Radiofrequency catheter ablation Of right atrioventricular accessory pathway via unconventional left subclavian venous access

Zhang Yonghua, Xi Su, Jinglin Zhang  
Wuhan Asia Heart Hospital

**Objectives:** To prove the effectiveness of radiofrequency catheter ablation (RFCA) of right atrioventricular accessory pathway Via Left subclavian venous Access.

**Methods:** 22 patients [14 men average age of  $(41.2 \pm 3.7)$  years old] underwent conventional electrophysiological study and diagnostic Right Atrioventricular accessory pathway, but unsuccessfully RFCA via femoral vein access. Try to RFCA via unconventional left subclavian venous access.

**Results:** The right atrioventricular accessory pathway were successfully eliminated by RFCA in all 22 cases during operation. The sites of the accessory pathway were from the right anterior septum in 3, the right free wall in 11, the right posterolateral in 8 cases. After ablation, no patient had recurrence. The success rate was 100%.

**Conclusions:** The anatomy of right atrioventricular accessory pathway is comparatively special. Occasionally, it is difficult to RFCA via femoral vein access. It's suggested that RFCA of right atrioventricular accessory pathway by unconventional left subclavian venous access may be an alternative approach.

## GW25-e3372

### Variation and significance of serum CARP, hs-CRP in patients with atrial fibrillation

Huang Xiaojiao, Chen Moshui

Department of Cardiology, Affiliated to Haikou Hospital Xiangya School of Medicine Central South University

**Objectives:** To explore the changes of serum levels of CARP, hs-CRP in patients with atrial fibrillation and its significance, and survey the relationship among CARP, hs-CRP and cardiac function.

**Methods:** 124 patients of our department were divided into atrial fibrillation group ( $n=64$ ) and sinus rhythm group ( $n=60$ ) according to ECG. The two groups were divided into three subgroups (the NYHA class I, the NYHA class II and the NYHA class III) according to the NYHA cardiac function class. On the second morning, Serum CARP levels in all patients were measured by enzyme-linked immune sorbent assay (ELISA), and serum hs-CRP levels were measured by latex enhance immune and turbidimetric immunoassay (PETIA). Then the levels of them were dealt with statistical analysis.

**Results:** (1) The levels of serum CARP, hs-CRP in atrial fibrillation group were significantly higher than those in sinus rhythm group ( $P<0.05$ ). In the same NYHA class subgroup, the levels of serum CARP, hs-CRP in atrial fibrillation group were significantly higher than those in sinus rhythm group ( $P<0.05$ ). (2) The levels of serum CARP, hs-CRP both in atrial fibrillation group and in sinus rhythm group were in sequence increased significantly with the NYHA class ( $P<0.05$ ).

**Conclusions:** (1) The levels of serum CARP, hsCRP in atrial fibrillation group were significantly higher than those in sinus rhythm group. The levels of serum CARP and hsCRP were significantly increased with the deterioration of cardiac function. (2) CARP and hsCRP may be involved in the occurrence and sustainment of atrial fibrillation. The levels of serum CARP, hsCRP may serve as an independent index of atrial fibrillation.

## GW25-e4526

### Efficacy of adjunctive ablation of complex fractionated atrial electrograms and pulmonary vein isolation in patients with atrial fibrillation: a meta-analysis

Wen Junjie, Yi Guangzhao, He Quan, Zhou Hongyu, Luo Suxin  
The First Affiliated Hospital of Chongqing Medical University

**Objectives:** To compare the efficacy and safety of pulmonary vein isolation (PVI) versus PVI plus adjunctive ablation of complex fractionated atrial electrograms (CFAEs) in patients with atrial fibrillation (AF) after a single procedure.

**Methods:** Literature search was conducted in PubMed, EMBASE, Cochrane Library, CBM, Elsevier, CNKI and VIP for the clinical controlled trials of PVI versus PVI plus adjunctive ablation of CFAEs in patients with AF, from January 1, 1980 to August 31,